No. 84-761

In the Supreme Court of the United States

OCTOBER TERM, 1984

DATA GENERAL CORPORATION, PETITIONER

v.

DIGIDYNE CORPORATION AND FAIRCHILD CAMERA AND INSTRUMENT CORPORATION

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

BRIEF FOR THE UNITED STATES AS AMICUS CURIAE

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QUESTION PRESENTED

Whether the court of appeals' erroneous conclusion that a plaintiff alleging a tie-in as a per se violation of Section 1 of the Sherman Act, 15 U.S.C. 1, may establish anticompetitive forcing without proving that the defendant had market power in a relevant market, warrants this Court's review of the court of appeals' judgment reversing a district court order granting judgment notwithstanding the verdict.

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INTEREST OF THE UNITED STATES

This brief is filed in response to the Court's invitation to the Solicitor General to express the views of the United States.

STATEMENT

1. Petitioner, Data General Corporation, manufactures computer systems, including one marketed under the trademark "NOVA." Pet. App. 2a, 23a. This system consists of a NOVA central processing unit (CPU) and a copyrighted operating system, known as "RDOS," that contains commands for operating the NOVA CPU. Data General's RDOS license agreements preclude licensees from using RDOS with any CPU not designated by Data General. Pet. App. 2a, 23a. In fact, Data General designated only its own CPUs for use with its licensed software (with two exceptions not relevant to this case). Pet. App. 23a & n.5.

Petitioner sells and licenses its products primarily to original equipment manufacturers (OEMs) who put together packages of

hardware (CPUs and peripheral equipment) and software (operating systems programs and applications programs) to serve the particularized needs of the end-users to whom they sell. Pet. App. 23a. The OEMs also develop applications programs to run with operating systems and CPUs. *Ibid.*

Respondents manufacture and market NOVA "emulators," CPUs modeled after Data General's NOVA and designed to run with the NOVA instruction set, *i.e.*, the NOVA CPU's internal language for performing certain basic tasks. Pet. App. 2a; see Pet. 3. Respondents filed suit under Section 1 of the Sherman Act, 15 U.S.C. 1, and Section 3 of the Clayton Act, 15 U.S.C. 14, alleging that Data General's tie of the NOVA CPU to the RDOS operating system is per se illegal. On cross-motions for summary judgment, the district court found that a trial would be required only on the question whether Data General possessed sufficient economic power in the market for operating systems software. Pet. App. 26a, 70a, 89a-90a.[1]

After a 45-day trial, the jury determined the issue of market power in respondents' favor. In special findings of fact, the jury found that a general market and narrower submarkets existed for both the tying and tied products. Rejecting the positions urged by the parties, the jury furnished its own definition of the relevant general markets for the tying and tied products. It found both markets to be identical. Compare Answer to Jury Question No. 1 ("The jury finds that the appropriate market for the [petitioner's] tying product is all general purpose minicomputers and microprocessors.") and Answer to Jury Question No. 4 ("The jury finds that the appropriate market for the [petitioner's] tied product is all general purpose minicomputers and microprocessors."). See

[1]The court held that the plaintiffs had established the other necessary elements of a per se illegal tie-in: *i.e.*, the RDOS software and the CPU hardware were two separate products (Pet. App. 71a-77a); the tie-in affected a not insubstantial amount of interstate commerce (*id.* at 96a-97a); plaintiffs were injured in fact by the tie-in (*id.* at 97a-100a); and Data General's asserted business justifications were not legally cognizable defenses or did not justify its conduct because "less restrictive alternatives" were available (*id.* at 102a-108a).

Pet. App. 34a.[2] With respect to submarkets, the jury accepted respondents' proposals that the tying product submarket was "operating system software which run with CPUs utilizing the NOVA instruction set" (Answer to Jury Question No. 3) and that the tied product submarket consisted of "CPUs utilizing the NOVA instruction set" (Answer to Jury Question No. 6). The jury also concluded that Data General had the power in one or both of the tying markets to raise prices or impose burdensome terms that could not be exacted in a competitive market, and that this resulted in an appreciable restraint in the tied product market. Pet. App. 36a.[3]

2. The district court granted Data General's motion for judgment notwithstanding the verdict. It concluded that, while the evidence supported the jury's definition of the relevant general markets for CPUs and software, it did not support the definition of submarkets limited to NOVA. Pet. App. 38a-40a.

The court also held that the evidence did not support the finding that Data General possessed sufficient economic power in either the tying product market or submarket. Pet. App. 40a, 49a. Indeed, the court noted respondents had not attempted to prove that competition was restrained in the broader general market. *Id.* at 40a, 48a-49a.[4] Data General also lacked economic power in the narrower NOVA submarket, the court reasoned, because a variety of alternative operating systems was available for NOVA emulators such as respondents. *Id.* at 50a, 54a. The

[2]There would, of course, be no tie-in if both products were in the same market. In this brief we therefore assume that the tying product market was intended to refer to operating system software for minicomputers and microprocessors and the tied product market was intended to be the minicomputers and microprocessors themselves.

[3]We cannot determine from the jury's responses to the interrogatories whether the finding of economic power and resulting restraint refers to the broader computer market, the NOVA submarket, or both. See Pet. App. 37a; see also note 2, *supra*.

[4]Respondents relied only on the per se rule to prove their claim; they did not attempt to show that Data General's practices were unlawful under the "rule of reason." Pet. App. 24a n.6.

court noted that the narrower submarket urged by respondents was essentially based on "locked-in" customers: those customers who purchased RDOS and designed their applications software for RDOS, thus becoming committed, or "locked in," to RDOS for the continued use of their applications software. *Id.* at 41a, 51a.[5] The court found that such a theory of market definition was untenable, however, since it erroneously looked to the alternatives available to customers *after* they made their initial decision to purchase RDOS, rather than to their options when making the initial choice of NOVA over competing systems. *Id.* at 52a; see also 53a-54a. Moreover, Data General did not engage in price discrimination between old and new customers (*id.* at 42a, 52a); thus, to attract new customers as well as keep its old customers, Data General needed to and did in fact price its products competitively and maintain them at a level functionally equivalent to or above the numerous competing products in the general market. *Id.* at 42a.

The court also found that RDOS was not sufficiently unique to give Data General an advantage over its competitors that would enable it to exercise power over price. Pet. App. 44a. Even assuming that RDOS was viewed by customers as superior to other software and, therefore, "uniquely" desirable, respondents had failed to prove that Data General's competitors were unable to develop functionally equivalent software. *Id.* at 45a. It would cost competitors no more to develop the necessary software than it had cost Data General to develop it originally—in fact the costs would be lower today. *Id.* at 47a.

3. The court of appeals reversed (Pet. App. 1a-20a). It concluded that the district court had erred in requiring proof of Data General's economic power "in the whole of the relevant market." Pet. App. 5a; see *id.* at 14a. The court stated the governing legal standard as follows: as long as a seller "has the capacity to force

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[5]The court found it "virtually impossible" to calculate the degree of "lock-in" to Data General software and the sensitivity to price of Data General's locked-in customers, but noted that, while converting existing programs to run with systems other than RDOS would be costly, it was feasible. Pet. App. 41a.

some buyers to purchase a tied product they do not want or would have preferred to purchase elsewhere," a per se illegal tie-in exists. *Id.* at 7a. Consequently, the court "review[ed] the record not for what it may reveal as to defendant's position in a defined market in which defendant's RDOS was sold, but only to determine whether the jury reasonably could have concluded defendant's RDOS was sufficiently unique and desirable to an appreciable number of buyers to enable defendant to force those buyers also to buy a substantial volume of defendant's NOVA instruction set CPUs they would have preferred not to buy." *Id.* at 8a; see *id.* at 16a.[6]

The court found sufficient evidence of the kind of "forcing" it viewed as determinative on the issue of Data General's market power. It reasoned that the initial decision to purchase Data General's package was "not free of forcing" because the copyright on RDOS made it unique as a matter of law, and RDOS was distinctively attractive to some customers as a matter of fact. Pet. App. 11a, 17a. Data General's power to coerce was "magnified," in the court's view, by the fact that many customers became "locked in" to RDOS once they purchased it and designed compatible applications software because it was not economical thereafter to convert those programs to run on other systems. *Id.* at 11a. The court accordingly concluded (*id.* at 20a) that the jury's verdict, "rather than being clearly contrary to the weight of the evidence, was a more-than-defensible resolution of a difficult issue."

DISCUSSION

The court of appeals' analysis conflicts with the rationale and holding of *Jefferson Parish Hospital District No. 2* v. *Hyde*, No. 82-1031 (Mar. 27, 1984), and other tie-in cases decided by this Court. The court of appeals mistakenly curtailed essential inquiries into market power and market definition, and described the appropriate judicial examination in a manner that may seriously interfere with efficient, procompetitive business practices. For

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[6]Thus the court deemed market analysis relevant only to monopolization cases, not tie-in cases. Pet. App. 15a-16a.

that reason, we believe the case warrants review by this Court. Our conclusion is not unequivocal. The complexities of the record, coupled with the differing factual findings of the jury, district court and court of appeals, make this case a less than ideal candidate for certiorari. Despite our reservations, the flaws in the court of appeals' opinion are so fundamental that they warrant prompt correction.

1. The court of appeals stated that it need not consider evidence of petitioner's power in the relevant market before condemning the tie-in of NOVA CPUs to RDOS software as illegal per se. The court interpreted *Hyde* as holding "that a tying arrangement is illegal *per se* if the seller of the tying product has the capacity to force *some* buyers to purchase a tied product they do not want or would have preferred to purchase elsewhere." Pet. App. 7a (emphasis added); see also *id.* at 15a-17a. This interpretation of *Hyde* is plainly wrong and is inconsistent with the central theme of the tie-in cases decided by this Court. Starting with the *Motion Picture Patents Case,* 243 U.S. 502 (1917), through *Hyde,* the Court's principal concern with tying arrangements flows from the potential transfer of economic power from one market into a second market. Thus, in *Times-Picayune Publishing Co.* v. *United States,* 345 U.S. 594, 611 (1953), the Court described the "common core" of the tie-in cases as "the forced purchase of a second distinct commodity * * * resulting in economic harm to competition in the 'tied' market." Subsequent to *Times-Picayune,* a number of this Court's tie-in decisions indicated that the usual analytical method for ascertaining the existence of significant market power could be eschewed. *Northern Pac. Ry.* v. *United States,* 356 U.S. 1, 7-8 (1958); *United States* v. *Loew's Inc.,* 371 U.S. 38, 45-46, 48-49 (1962). But in *United States Steel Corp.* v. *Fortner Enterprises, Inc. (Fortner II),* 429 U.S. 610, 620 & n.13 (1977), the Court returned to the traditional rationale for proscribing anticompetitive tie-ins and retreated from the language of *Northern Pacific* and *Loew's* " 'which could be read to make actual market power irrelevant.' " *Hyde,* similarly, preserved the primacy of market impact, expressly distinguishing those factors that "may generate 'market power' in some abstract sense, [but that] do not generate the kind of

market power that justifies condemnation of tying," slip op. 24 (footnote omitted).

a. This Court held in *Hyde* that a hospital's policy of requiring surgical patients to use the services of a group of anesthesiologists with which the hospital had an exclusive contractual arrangement was not illegal per se. In reaching this conclusion, the Court proceeded from a well-established premise: "every refusal to sell two products separately cannot be said to restrain competition." Slip op. 8. Indeed, "[b]uyers often find package sales attractive; a seller's decision to offer such packages can merely be an attempt to compete effectively—conduct that is entirely consistent with the Sherman Act." *Ibid.* For this reason, "tying may have procompetitive justifications that make it inappropriate to condemn without considerable market analysis." *National Collegiate Athletic Association* v. *Board of Regents,* No. 83-271 (June 27, 1984), slip op. 17 n.26.

Because the propriety of adopting a per se approach to particular conduct turns on "the probability of anticompetitive consequences" (*Hyde,* slip op. 12), per se condemnation of a tie-in is appropriate only where "anticompetitive forcing is likely." *Id.* at 13. Such economic coercion is not likely, however, unless a "seller has some special ability—usually called 'market power'—to force a purchaser to do something that he would not do in a competitive market." *Id.* at 10. Thus, "anticompetitive forcing," as described in *Hyde,* does not exist simply because some purchasers of a tied sale would prefer to purchase the tying product separately. *Id.* at 21 (emphasis added) (only if consumers are "forced * * * *as a result of the [seller's] market power* would the arrangement have anticompetitive consequences"); *id.* at 22 (emphasis added) ("The question remains whether this arrangement *involves the use of market power to force* [the sale of unwanted services]."). If the market is competitive, the fact that a buyer would prefer a sale on different terms is of no competitive consequence.[7]

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[7]Thus, while the absence of forcing precludes a finding of per se violation (*Hyde,* slip op. 24-25), the presence of forcing—in the sense that customers must take a product that they would not select in the absence of a tie-in—does not by itself compel condemnation. "[T]he

The availability of alternatives prevents the buyer from being "forced" in any anticompetitive sense: the tie-in is accepted because purchasers find it more desirable than the components sold either independently or as packaged by the seller's rivals. Thus "any inquiry into the validity of a tying arrangement must focus on the market or markets in which the two products are sold," *Hyde*, slip op. 14, with "controlling weight" assigned to "the whole and not part of a relevant market." *Times-Picayune Publishing Co.* v. *United States*, 345 U.S. at 611. As this Court stated in *Continental T.V., Inc.* v. *GTE Sylvania, Inc.*, 433 U.S. 36, 53 n.21 (1977), "an antitrust policy divorced from market considerations would lack any objective benchmarks."

It was the issue of economic power in the tying product market that proved decisive in *Hyde*. The Court concluded that the "preference of persons residing in Jefferson Parish to go to East Jefferson, the closest hospital * * * is not necessarily probative of significant market power." Slip op. 23. The hospital's 30% market share did "not establish the kind of dominant market position that obviates the need for further inquiry into actual competitive conditions." *Ibid.* And the hospital's packaged sales policy was not anticompetitive because patients who were not indifferent to anesthesiological services could elect to go to competing hospitals employing other anesthesiologists. *Id.* at 26-27.

b. The court of appeals' decision here eliminates the need to prove market power as a predicate to establishing anticompetitive forcing. Under the court's analysis, as long as "some buyers" find the tying product "unique and desirable" (as opposed to perfectly fungible with products made by other producers), acceptance of the tied sale would constitute the requisite forcing. See Pet. App. 17a.

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essence of illegality in tying agreements is the wielding of monopolistic leverage; a seller exploits his dominant position in one market to expand his empire into the next." *Times-Picayune Publishing Co.* v. *United States*, 345 U.S. 594, 611 (1953). This Court has long recognized that "where the seller has no control or dominance over the tying product so that it does not represent an effectual weapon to pressure buyers into taking the tied item any restraint of trade attributable to such tying arrangements would obviously be insignificant at most." *Northern Pac. Ry.* v. *United States*, 356 U.S. 1, 6 (1958).

The court of appeals' decision fails to recognize that a competitive market economy provides not only the benefit of low prices but also the advantage of a wide variety of goods and services. 2 P. Areeda & D. Turner, *Antitrust Law* § 410 (1978). Producers are spurred by incentives to meet the varied demands of a multitude of different consumers.[8] For example, a number of producers may sell competing goods that perform the same general function. Yet, each producer's offering may differ slightly and

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[8]Product innovation is, of course, a form of competition to be encouraged and rewarded. In high technology fields, the packaging of two or more physically compatible, complementary products that are, at least temporarily, incompatible with other existing goods (like Data General's RDOS and NOVA CPU), may be a form of innovation that confers consumer benefits. See Note, *An Economic and Legal Analysis of Physical Tie-Ins*, 89 Yale L.J. 769, 772-774 (1980); Sidak, *Debunking Predatory Innovation*, 83 Colum. L. Rev. 1121, 1141 (1983). Temporary monopoly profits may be tolerable to the extent that they are the natural result of the innovation process, and because they provide the necessary incentive for firms to innovate. Note, *supra*, 89 Yale L.J. at 776; Sidak, *supra*, 83 Colum. L. Rev. at 1141 (technological tie-ins provide a means to counteract the "free-rider" problem in new information, and thus reduce the risk of undertaking investment in innovative activity); see also Note, *Innovative Competition: Beyond Telex* v. *IBM*, 28 Stan. L. Rev. 285, 287-298 (1976). In determining whether the tie-in is likely to have long-run exclusionary effects, it is important to look at the seller's market power, gauged principally by the seller's market share. Note, *supra*, 89 Yale L.J. at 780-781. If there are other sizeable sellers of the tying product, then the producers of the complementary, tied product will still have outlets for their products. Moreover, to the extent that there are competing tying and tied products, the innovator's ability to raise prices and restrict supply is reduced. *Id.* at 781. "Similarly, if both markets exhibit high rates of innovation, then it is likely that any monopoly power acquired by the innovator can be supplanted easily by a competitor's subsequent innovation." *Id.* at 782; accord, 2 P. Areeda & D. Turner, *supra*, § 410, at 307. In this case, the court of appeals cited testimony that RDOS would be obsolete by the time Data General's competitors could "reproduce" it. Pet. App. 10a. From this, the court of appeals assumed that petitioner's product was "unique" and that it possessed an advantage over its rivals, when in fact this consideration may simply reflect the reality that the software industry is a dynamic one, with constant technological innovation serving to diminish the temporary ability of the most recent innovator to reap supra-competitive profits.

so satisfy a particular group of consumers (*e.g.*, different groups of consumers may have different preferences). In that event, the consumers of each producer's good might regard it as unique and desirable relative to competing offerings. But in the absence of market power, an individual seller's attempt to raise price significantly above cost (or "to require purchasers to accept burdensome terms," *Fortner II,* 429 U.S. at 620 & n.13), would be unprofitable because a sufficient number of purchasers would switch to alternatives, notwithstanding their opinion as to the unique desirability of the seller's product. See, *e.g., Northern Pac. Ry.*, 356 U.S. at 7-8. Even though some purchasers would undoubtedly continue to purchase the seller's product at the higher price, the loss in total sales from those who switched would offset the higher price on remaining sales.[9] In short, goods may be unique and desirable yet have no market power. A large percentage of the competitive markets that exist in today's economy could accurately be so described. See *Hyde,* slip op. 8 (packaged sales may merely be evidence of competition at work); *id.* at 23 (consumer preference for a particular product does not prove that the seller has market power).

The court of appeals' opinion reflects no awareness of evidence in the record of other operating systems in competition with RDOS (some of which outsold RDOS in the general market, Tr. 3614);[10] it eschewed any analysis of "whether [those operating

[9]If a seller lacks power over the tying product, the fact that an "appreciable" number of buyers acquiesce in the tie proves only that the terms offered by a particular seller for the combination of the tying and tied products are more attractive to the buyer than the terms on which the products are offered separately. See *Fortner II,* 429 U.S. at 620 n.13. The court of appeals erroneously stated, however, that "market power" was evidenced by the fact that customers might pay a higher price for Data General's hardware (but not necessarily a higher price for the total hardware-software package) than for the hardware of other suppliers in order to obtain Data General's software, which they viewed as "superior." Pet. App. 18a.

[10]It appears that respondents did not introduce evidence bearing specifically on Data General's share of the broader (tying) market defined by the jury, and did not attempt to establish that Data General had a sufficient market share to enable it to wield economic power in that market.

systems] were as good as RDOS or better in the eyes of some buyers" (Pet. App. 17a) or whether those other systems were offered unbundled, so that buyers could choose Data General's package or buy the hardware and software separately from Data General's competitors.[11] That evidence is clearly relevant, however. If "the products may be purchased separately in a competitive market, one seller's decision to sell the two in a single package imposes no unreasonable restraint on either market * * *." *Hyde,* slip op. 8.

2. Reinforcing the court of appeals' belief that the distinctiveness and desirablility of RDOS to some customers evidenced Data General's ability to engage in anticompetitive forcing was

[11]The district court cited evidence that "[t]he industry itself views the market as a general market for a broad range of computer services" (Pet. App. 39a); that "[respondents] own documents show that competitors do not view the market in terms of any particular vendor's instruction set" (*id.* at 40a); that numerous companies market software alone, to be used with CPUs such as petitioner's NOVA, and numerous companies market CPUs alone, to be used with software such as that licensed by petitioner (*id.* at 72a); and that some companies that market both software and CPUs offer their software unbundled. *Id.* at 73a. The district court also cited evidence that, while other software products on the market are sold separately from CPUs, many customers prefer to purchase hardware and software from the same manufacturer. *Id.* at 72a. The court of appeals did not review this evidence because it was deemed irrelevant.

The district court also relied on evidence that Data General's competitors could develop the necessary software to accompany their NOVA CPUs, perhaps more easily than Data General had developed it in the first instance, or could procure compatible software from third-party suppliers. Pet. App. 47a, 54a. Respondent Fairchild had developed NOVA-compatible software (*id.* at 47a) and non-Data General-compatible software has been used with respondent Digidyne's CPUs. *Id.* at 54a. The court of appeals relied on other evidence that to "reproduce" RDOS would be impossible or futile (Pet. App. 10a & n.3), and to create a "compatible system would require millions of dollars and years of effort." *Ibid.* But the court did not disturb—or even address—the district court's determination that others in the market were already marketing NOVA-compatible systems, and that the investment in such a system would be no greater than Data General's. Nor did the court of appeals examine the evidence concerning the availability of "comparable" systems (see Pet. App. 17a).

the fact that RDOS was protected by a copyright. The court regarded the copyright as creating a presumption of economic power "sufficient to render the tying arrangement illegal *per se*" (Pet. App. 15a), and it therefore failed to analyze the relevant market to determine whether substitute software was available. Indeed, the court of appeals expressly criticized the district court for inquiring "whether there were reasonably interchangeable substitutes for RDOS in the operating systems market as a whole." *Ibid.* This refusal to consider the availability of competitive alternatives runs counter to the holdings of *Hyde* and *Fortner II*.

a. This case presents a suitable context for clarification of this Court's past statements on the competitive impact, if any, that is to be presumed from the existence of a copyright. In *Loew's*, the Court held that a copyrighted film could confer the requisite economic power where the district court found that each such film is unique in terms of theme, performance, and audience appeal (371 U.S. at 48), and where adverse competitive effects of block booking had also been demonstrated. *Ibid.* The Court cautioned, however, that, while it could not then conceive of such a case, there might be cases in which a tie-in of copyrighted articles should not be prohibited. *Id.* at 49-50.

Three years later, in *Walker Process Equipment, Inc.* v. *Food Machinery & Chemical Corp.*, 382 U.S. 172, 177-178 (1965), the Court held that a patent does not necessarily define a relevant market and that in the absence of market analysis to determine whether substitute products are available, a patent holder's market power cannot be assessed. Last Term, dictum in *Hyde* (slip op. 13) suggested a return to the pre-*Walker Process* formulation, while four Justices would have rejected any presumption of market power from a patent or copyright (slip op. 6 n.7) (O'Connor, J., concurring).[12]

[12]In this case, the district court suggested that the presumption of economic power stemming from a copyright notice "may be inappropriate in the computer software context because copyright notices do not necessarily prevent others from copying the material embodiment of the source program." Pet. App. 45a.

A copyright enables its holder to prevent others from reproducing the copyrighted work. But copyright protection extends only to particular expressions of concepts in the copyrighted work, and not to the concepts themselves. *Harper & Row Publishers, Inc.* v. *Nation Enterprises*, No. 83-1632 (May 20, 1985), slip op. 16; *Baker* v. *Selden*, 101 U.S. 99 (1879); 17 U.S.C. 102(b). Thus, a computer program that embodies "'the only and essential means of accomplishing a given task'" is not entitled to copyright protection. *Apple Computer, Inc.* v. *Formula International Inc.*, 725 F.2d 521, 525 (9th Cir. 1984), quoting the National Commission on New Technological Uses of Copyright Works, *Final Report* 20 (1979). Indeed, "even identical or substantially similar works would be eligible for protection if independently created." Keplinger, *Computer Software—Its Nature and Its Protection*, 30 Emory L.J. 483, 506 (1981); *Synercom Technology, Inc.* v. *University Computing Co.*, 462 F. Supp. 1003, 1013 (N.D. Tex. 1978). Thus, copyright protection does not prevent others from offering products that perform the same functions as the copyrighted product. The court of appeals disagreed with the district court's analysis of copyright law, but did not explain the basis for its disagreement. See Pet. App. 15a n.5.

b. In any event, though the court of appeals acknowledged that the presumption of economic power is rebuttable (Pet. App. 15a), it then disregarded the evidence on which the district court relied (*e.g.*, proof that compatible and comparable systems were in fact available). The district court viewed the evidence in the light most favorable to respondents and assumed for purposes of its opinion that Data General's customers considered "RDOS as uniquely desirable and * * * superior to other software." Pet. App. 44a. It also found, however, that Data General's competitors were not "prevented from developing functionally equivalent software" (*id.* at 45a; see *id.* at 39a, citing "[c]ustomer testimony * * * that the desirable features of RDOS could be found in other operating systems, and [that other] systems [were] competitive with or superior to Data General's"). Other companies, including respondent Fairchild, produced software that was compatible with the NOVA instruction set (*id.* at 51a, 54a), and other operating systems were available for use with NOVA emulators. *Id.* at 54a. There was also evidence that others could develop software comparable to Data General's if they were willing to invest equivalent resources and take equivalent risks. *Id.* at 47a; see also *Fortner II*, 429 U.S. at 617, 621-622.

The court of appeals did not disagree with the district court's analysis of the evidence. Pet. App. 14a-15a. Rather, it simply disregarded that analysis, stating that the district court "was misled by [the] conception that power throughout the product market for the tying product was required." Pet. App. 15a. Under the standard applied by the court of appeals, "[t]he question is not whether other operating systems with which RDOS competed were as good as RDOS or better in the eyes of some buyers, but rather whether RDOS, available only from [Data General], was sufficiently attractive to some customers to enable defendant to require those who wished to obtain it also to buy from [Data General] NOVA instruction set CPUs they might otherwise have purchased from others." Pet. App. 17a. This legal standard is plainly contrary to this Court's decisions in *Hyde* and *Fortner II*.

3. The court of appeals' determination that Data General possessed sufficient "power" to warrant per se condemnation was also based on Data General's "potential power to coerce" its "locked-in" customers, *i.e.*, those customers who had made a substantial investment in applications software designed to run with RDOS and who thus would be willing to pay a premium for RDOS, rather than turn to a different operating system. See Pet. App. 11a-12a.[13] This *ex post* view ignores how competition in the market operates and provides a misleading indication of the extent of Data General's market power.[14]

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[13]The district court cited evidence that locked-in customers could convert existing applications programs to run on other systems (Pet. App. 41a), while the court of appeals cited evidence that conversion was not economically feasible. Pet. App. 11a & n.4. We assume that, at least for some customers, conversion was not a viable economic alternative.

[14]The district court rejected petitioner's proposal that the jury be instructed that "power over the tying product" should be viewed "at the time of initial selection by the buyer." Data General's Proposed Jury Instructions, Mar. 3, 1981, at 41; Data General's Objections to Revised Jury Instructions, May 25, 1981, at 25; Tr. 7614-7616. The district court had previously rejected petitioner's motion in limine to exclude as irrelevant all evidence of "software lock-in" of existing customers. Mar. 20, 1981 Tr. 178-182.

The principal flaw in the court of appeals' "lock-in" analysis is its departure from commercial and economic reality. By shifting the locus of inquiry from the time when a customer *first chooses* the NOVA system to a time after the customer has become committed to that system, the "lock-in" concept skews proper analysis. Thus in *Hyde*, market power was assessed with reference to the time when patients selected East Jefferson Hospital (*Hyde*, slip op. 23-24), not at the subsequent time when, having chosen East Jefferson, they were being wheeled into the operating room.[15]

Any ongoing commercial relationship is subject to "lock-in." For example, a company that requires a raw material may seek to assure an ample supply by signing a long-term, fixed-price contract. It is then "locked-in" to those terms. Should the spot price later drop below the contract price, the fact that the seller continues to receive the contract price from his "captive" customer does not indicate market power. That is because the relevant time frame for measuring the seller's competitive position is when the buyer entered into the contract in preference to some alternative arrangement.

To some extent every OEM that developed applications software tailored to a particular system—be it RDOS or any other operating system—could become "locked-in" to that system,

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[15]Suppose, for example, a manufacturer of a product made of steel decides to locate his factory near a particular steel mill and to enter into a long-term relationship with the mill in order to minimize his input transportation costs. In making his choice, the manufacturer had a choice of numerous steel mills with which to deal, and ultimately chose the mill that offered the best deal initially in competition with the other mills. Also, because of the steel mill's proximity, the manufacturer set up his factory to use "hot" steel from the adjoining mill, realizing that his factory could not, without substantial alterations, use "cold" steel from more distant mills. If, after a time, the steel mill tries to raise its prices, its ability to do so will depend on the extent to which the manufacturer has contractually protected himself from such *ex post* exploitation. Competition among steel mills (a subject of antitrust concern) protected the manufacturer's original decision; a long-term agreement and the remedies of contract law, not the antitrust laws, must provide protection from after-the-fact exploitation.

depending on how they designed their applications software.[16] Every OEM that invested in a particular system ran the risk that an operating system licensor would raise the price or exact more onerous terms for future licenses. The court of appeals' *ex post* analysis would lead it to find that each supplier of operating systems software possessed market power.[17] However, only if the supplier of the operating system software possessed market power at the time the OEM first invested in a particular system would antitrust concerns be raised.

As the district court noted, the "locked-in" customers selected petitioner's products "only after evaluating the broad range of competitive hardware and software offerings" available. Pet. App. 39a. Any customer investing in a particular operating system—be it RDOS or any of the numerous other systems on the market—could reasonably foresee certain economic risks (such as obsolescence of the software due to new technology) and would have a strong incentive to ensure, through long-term contracts or other means, that any software seller that they patronized would not exploit the situation[18] (*e.g.*, by making

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[16]Vendors could, and did, develop their applications software to run on more than one type of instruction set (Data General's Special C.A. App. SA-45), or to be easily convertible to other operating systems (Pet. App. 41a). In these ways, the effects of "lock-in" were minimized.

[17]Per se condemnation of Data General's packaged sales practice thus would necessarily require condemnation of every seller's packaged sales practices, no matter how small the seller's market share. Since, as this Court has recognized, packaged sales arrangements are frequently attractive to buyers and procompetitive (*Hyde*, slip op. 8), such a broad proscription against packaged sales is not consistent with the primary objective of the antitrust laws of promoting competition.

[18]Sellers might exploit that lock-in through a tie-in, or simply by charging higher prices for the software alone. From the customer's point of view, it would make little difference which form the "exploitation" might take. And, in the absence of market power by the seller in either the tying or the tied market, it would make little difference to the competitive structure of the industry. There were obvious constraints on Data General's ability to exploit its locked-in customers, however. See note 20, *infra*.

licensing terms more burdensome). If, as the district court concluded, Data General lacked power in the market viewed *ex ante*, then the packaged sale at issue in this case should not have been condemned as illegal per se. In any event, if, as the district court believed, petitioner needed to retain its ability to attract new customers and its customers should have been aware[19] of the risks of lock-in, petitioner's ability to exploit its "locked-in" customers was limited.[20]

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[19]While Data General did not "tie" RDOS to the NOVA CPU when those products were first introduced, it apparently did so beginning in 1971. By the time the relevant period in this case commenced (1977), all of Data General's RDOS licensing agreements contained language limiting its use to CPUs designated by Data General; thus, anyone making an initial purchase in the relevant period could have been alerted to the risks of lock-in.

[20]In order to attract new customers, Data General would have a strong incentive not to exploit its old locked-in customers because new customers would be expected to avoid a supplier with a reputation for exploitation. Moreover, because many of the purchasers of RDOS resold the software in competitive markets, an increase in price for RDOS (through burdensome tying terms) would reduce the demand at resale and so would force the locked-in customers to reduce their purchases of RDOS. Pet. App. 42a. And if, as the district court found (*id.* at 41a-43a, 48a), Data General did not discriminate in price between new and existing customers, it would have to price its product attractively to locked-in customers, or forgo sales to new customers.

The court of appeals did not dispute the district court's findings that Data General competed for new customers and priced competitively, but it viewed these facts as irrelevant for essentially the same reasons that it declined to examine other evidence relating to market power. Pet. App. 18a.

As respondents point out (Br. in Opp. 13-14 n.16), under the *U.S. Department of Justice Merger Guidelines*, it is sometimes appropriate to view a narrow class of customers as comprising a relevant product market if the seller has the ability profitably to impose a "small but significant and nontransitory" increase in the price of its products to that group of buyers who cannot easily substitute away, while selling at a lower price to another group of buyers who are more price-sensitive. See Antitrust Division, *U.S. Department of Justice Merger Guidelines* §§ 2.13, 2.33 (June 14, 1984). But, while locked-in customers might

4. While the opinion of the court below is flatly inconsistent with the teachings of this Court, the case is not an ideal candidate for certiorari. First, the procedural posture—a jury verdict overturned by judgment n.o.v. that itself was reversed on appeal—casts upon the antitrust issues a shadow of factual complexity. Each decision below is based on a different understanding of the facts, thus posing a question whether the proper standard of review was applied at each level.

Second, although the court of appeals' analysis was incorrect, we cannot say that a properly instructed jury could not, as a matter of law, have returned a verdict in favor of respondents. Since, however, the jury was not instructed to weigh market power *ex ante* (see note 14, *supra*), its verdict was vulnerable to attack. In any event, there is considerable uncertainty over what the jury did find. As noted above (pages 2-3), the jury defined the tying and tied product markets as the same market. Then, after defining submarkets, the jury found that petitioner had economic power in the "market or submarket" (Answer to Jury Question No. 7). Finally, to compound the confusion, the jury's general verdict referred only to "the market," with no mention of a submarket.[21] While we note these concerns, we believe that they

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appear to comprise such a relevant market if this market is viewed *ex post*, that view would not be appropriate for the reasons discussed above.

Respondents also rely (Br. in Opp. App. 8a) on the fact that the majority of Data General's sales of NOVA were to "old" customers, suggesting that petitioner did, in fact, forgo sales to new customers. That phenomenon, however, is not surprising in a market where technological advances have made an expanding array of new products available. Those who are committed to the existing system (*i.e.*, "old" customers) will continue to purchase, while new customers may look to more recent offerings. One would expect, for example, that a company marketing leather strops for straight-edge razors will sell largely to previous customers; the low percentage of sales to first-time buyers would not reflect exploitation, but simply the fact that such customers may prefer safety razors, disposable blades, or electric shavers.

[21]Accordingly, when the court of appeals refers to evidence that "supported the jury's verdict" (Pet. App. 14a) its meaning is less than clear. See also *id.* at 8a, 11a, 17a, 18a, 20a.

need not detain this Court because they are more appropriate for consideration by the court of appeals on remand, once the correct substantive antitrust principles have been stated by this Court.

CONCLUSION

The petition for a writ of certiorari should be granted.

Respectfully submitted.

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